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EXAMINER

KIM, CHONG HWA

ART UNIT PAPER NUMBER

3682

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**GROUP 3600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 12

Application Number: 09/888,478  
Filing Date: June 26, 2001  
Appellant(s): NAHRWOLD, THOMAS

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Matthew W. Stavish  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed Dec 22, 2003.

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**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1 and 3-20 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

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5,316,106

Baedke et al.

5-1994

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3-5, 9-15, 19, and 20 are rejected under 35 U.S.C. 102(b). This rejection is set forth in prior Office Action, Paper No. 6.

Claims 6-8 and 16-18 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office Action, Paper No. 6.

**(11) *Response to Argument***

Sub-Paragraph (iii)

In response to the appellant's argument that Baedke "fails to disclose any type of cooler 'mounted external the first axle tube'...or any type of cooler 'mounted on an adjacent axle tube'", it is the Examiner's interpretation of Baedke that shows coolers 16 and 17 mounted external/adjacent the axle tubes 44 and 46, respectively.

The appellant argues that "axle tube" is a "notoriously well known definition" in the art of automotive that refers to a tube that "is usually narrow in relation to its length" to house an axle. Thus, the appellant further argues, the elements 44 and 46 of Baedke are not "axle tube(s)" but rather "small trunnion(s)".

The Examiner disagrees with the appellant's assertions. 1) There is no clear definition set forth for the term "axle tube" in the automotive industry; 2) the elements 44 and 46 can be construed as "axle tubes"; 3) the elements 44 and 46 are not "trunnions"; and 4) the elements 16 and 17 are coolers.

1) As provided, in the Exhibit I and II, SAE, Society of Automotive Engineers, does not refer the appellant's "axle tube" as an "axle tube" but rather "housing – axle" (see Figs. 1 and 2 for both Exhibits). If the so called "axle tube" is "notoriously well known" as the appellant asserts, then why doesn't SAE, that is the authoritative institute on automotive engineering, refer the axle housing as the "axle tube"? It appears that the terminology used to describe the tube housing that receives the axle is utilized according to the preference of the person using it. Some would prefer to refer it as "axle tube"; some would prefer to call it a "housing axle"; or some would prefer to describe it simply as a "tube". There is no nomenclature for such device. It is noted that the word "tube" is defined, as broadly stated, "any of various usu. cylindrical structures or devices" by Merriam Webster's Collegiate Dictionary, 10<sup>th</sup> Edition.

2) The elements 44 and 46 of Baedke can be construed as the 'axle tubes' since Baedke, in Figs. 1 and 2 (particularly in Fig. 2), shows the cutting view of element 46 having a tubular shape that is narrow in relation to its length that houses the axle if one is to follow the appellant's definition. Moreover, Baedke describes the element 44 and 46 as "tubular extensions" which suggests that the elements 44 and 45 are "tubes". As noted above in response 1), the tube does not have to have a feature having an opening that is narrow in relation to its length. Therefore, even if the elements 44 and 46 of Baedke is construed to have a length that is shorter than the opening, the elements 44 and 46 can be defined as "tubes".

3) The elements 44 and 46 are not trunnions. The word "trunnion" is defined as "a pin or pivot on which something can be rotated or tilted" by Merriam Webster's Collegiate Dictionary, 10<sup>th</sup> Edition. The elements 44 and 46 are not pins or pivots on which the differential housing 12 is rotated or tilted. The elements 44 and 46 are "tubes" for receiving/housing the axles.

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4) The elements 16 and 17 are coolers. Baedke discloses, in column 4, lines 3-10, that the tube elements 16 and 17 can be utilized to effectively cool the lubricant that passes through them.

### Claim 3

In response to the appellant's argument that the limitations in claim 3 is not anticipated by Baedke, it is the Examiner's view that Baedke shows every limitations recited in claim 3. It is described in the rejection of claim 3 by Baedke in paper No. 6, paragraph 2, that the first elevation is defined in the chamber 66 or near the indicating reference no. 76, the second elevation is located near the indicating reference no. 80, and the third elevation is the lowest interior surface of the channel formed in the cooler 16 or 17 that is connected to the axle tube 44 or 46 (see Fig. 4). Therefore, the lowest interior surface of the channel formed in the cooler 16 or 17 is lower than the first and second elevations. The first conduit is the element 72, the second conduit is the channel formed in the cooler 17 and the all are hydraulically connected as recited in claim 3.

### Claim 13

Since the appellant argues the same subject matter recited in claim 3, the Examiner believes the above response can be applied to claim 13 argument.

### Claim 15

In response to the appellant's argument that Baedke fails to show the cooler being mounted on an exterior of the axle tube, it is the Examiner's view that such configuration is shown by Baedke. The word "exterior" has been interpreted as being "situated on the outside" rather than "on the outside surface" (see Merriam Dictionary). And such limitation does not

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explicitly recite that the cooler is mounted on the outside surface of the axle tube. The limitation only touches on the fact that the cooler is mounted outside of the axle tube. It appears that the exact location of the cooler mounting area is not important or necessary. Therefore, it is construed that the cooler 16 or 17 of Baedke is mounted on the brake drum 18 situated on the outside of the axle tube.

Sub-paragraph (iv)

In response to the appellant's argument that Baedke fails to show the cooler mounted on an axle tube as set forth in claims 1 and 11, the Examiner believes that such argument has been fully responded above, thus it is not necessary to repeat in this section.

In response to the appellant's argument that Gabelli fails to teach a valve for controlling flow of lubricant to and from a cooler, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Baedke shows every element recited in claims 1 and 11, but fails to show the valve. Gabelli reference is utilized to show that it would be obvious to incorporate the temperature sensitive valve as taught by Gabelli. Such incorporation would improve the life expectancy of the lubricant.

In response to the appellant's argument that neither prior art suggests, nor provides any motivation to modify the "gravity" driven system of Baedke with a valve, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of

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the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Baedke shows the lubricant flow passage via the chamber and the conduits. However, Baedke fails to show a valve that is controlled by the temperature of the fluid to open or shut at the chamber outlet. In view of the valve that is temperature sensitive as taught by Gabelli, one of ordinary skill in the art at the time the invention was made to apply the teaching of Gabelli in the lubricant cooling device as disclosed by Baedke in order to provide a better flow control system that would increase the life of lubricant. As to the matter of "gravity" driven system as the appellant emphasized, it is not understood fully what the appellant is trying to argue. It appears that both prior art deal with gravity flow.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).



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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

chk

February 27, 2004

Conferees

db

jl



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